

## AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application.

### Listing of Claims:

1. A method for obtaining a liquid sample forming a monolayer of desired individual cells or particles for optical examination comprising:
  - a) providing an apparatus comprising:  
a sample chamber comprising  
two containment walls, at least one of them being transparent for optical examination;  
at least one wall for holding said containment walls at a distance, and enclosing an interior space;  
a separation wall comprising at least a first type of separation channel that is of sufficient size and dimensions to allow desired cells to pass while excluding larger cells from passing, and a second type of separation channel, that is of sufficient size and dimensions to exclude desired cells and larger cells from passing while allowing the liquid component of the sample to pass freely, wherein the interior space of said sample chamber is divided into a first compartment and a second compartment by said separation wall, and whereby the distance between said containment walls in the second compartment in the chamber is sized so that individual desired cells or particles present in the sample will form a monolayer when the chamber is filled with the sample;  
a sample entrance into the first compartment; and  
a means for venting the sample chamber during filling;
  - b) depositing a liquid sample into the sample entrance of said sample chamber;

- c) allowing the sample to flow from the sample entrance into the first compartment;
- d) allowing the sample to advance to the separation wall and to the separation channels therein;
- e) allowing desired cells in the sample to pass [advance] through the first type of separation channels in the separation wall and allowing the liquid component of the sample to pass through the [first and] second type of separation channels in the separation wall;
- f) allowing the passed sample portion to continue to advance until it reaches and stops at the end of the sample chamber; and
- g) obtaining a liquid sample forming a monolayer of desired individual cells or particles

2. (Original) The method according to Claim 1 wherein said liquid sample is blood.

3. (Currently Amended) The method according to Claim 1 wherein in step (a) of said method, said apparatus provided therein further comprises a moat surrounding the sample chamber to allow for adequate venting of air through a multiplicity of venting-channels in said wall, while said sample chamber fills with liquid.

4. (Currently Amended) The method according to Claim 3 wherein in step (a) of said method, said moat in the apparatus provided therein further comprises at least one capillary stop to prevent uncontrolled flow.

5. (Original) The method according to Claim 3 wherein said liquid sample is blood.

6. (Previously Amended) The method according to Claim 1 wherein said first separation channel is 3 to 10  $\mu\text{m}$  deep by 5 to 50  $\mu\text{m}$  wide.

7. (Previously Amended) The method according to Claim 1 wherein said second separation channel is 0.5 to 1.5  $\mu\text{m}$  deep by 50 to 1000  $\mu\text{m}$  wide.
8. (Previously Amended) The method according to Claim 3 wherein said first separation channel is 3 to 10  $\mu\text{m}$  deep by 5 to 50  $\mu\text{m}$  wide.
9. (Previously Amended) The method according to Claim 3 wherein said second separation channel is 0.5 to 1.5  $\mu\text{m}$  deep by 50 to 1000  $\mu\text{m}$  wide.
10. (Currently Amended) The method according to Claim 1 wherein in step (a) of said method, said apparatus provided therein further comprises a plurality of notches displaced laterally across the flow path in the interior space of said sample chamber in order to even out the advancing fluid meniscus.
11. (Currently Amended) The method according to Claim 3 wherein in step (a) of said method, said apparatus provided therein further comprises a plurality of notches displaced laterally across the flow path in the interior space of said sample chamber in order to even out the advancing fluid meniscus.
12. (Currently Amended) The method according to Claim 1 wherein in step (a) of said method, said apparatus provided therein further comprises a plurality of notches displaced laterally across the flow path in the first compartment of said sample chamber in order to even out the advancing fluid meniscus.
13. (Currently Amended) The method according to Claim 3 wherein in step (a) of said method, said apparatus provided therein further comprises a plurality of notches displaced laterally across the flow path in the first compartment of said sample chamber in order to even out the advancing fluid meniscus.

14. (Original) The method according to Claim 10 further comprising after step (c), allowing the sample to flow past each notch in the first compartment; and after step (e), allowing the sample to flow past each notch in the second compartment.
15. (Original) The method according to Claim 11 further comprising after step (c), allowing the sample to flow past each notch in the first compartment; and after step (e), allowing the sample to flow past each notch in the second compartment.
16. (Original) The method according to Claim 12 further comprising after step (c), allowing the sample to flow past each notch in the first compartment.
17. (Original) The method according to Claim 13 further comprising after step (c), allowing the sample to flow past each notch in the first compartment.
18. (Original) The method of Claim 1 wherein said second compartment has an internal volume which is smaller than the internal volume of said first compartment.
19. (Previously Amended) The method of Claim 1 wherein said second compartment has a thickness of from 1 to 7  $\mu\text{m}$ .
20. (Previously Amended) The method of Claim 1 wherein said first compartment has a thickness of from 10 to 50  $\mu\text{m}$ .
21. (Original) The method of Claim 3 wherein said second compartment has an internal volume which is smaller than the internal volume of said first compartment.
22. (Previously Amended) The method of Claim 3 wherein said second compartment has a thickness of from 1 to 7  $\mu\text{m}$ .
23. (Previously Amended) The method of Claim 3 wherein said first compartment has a thickness of from 10 to 50  $\mu\text{m}$ .